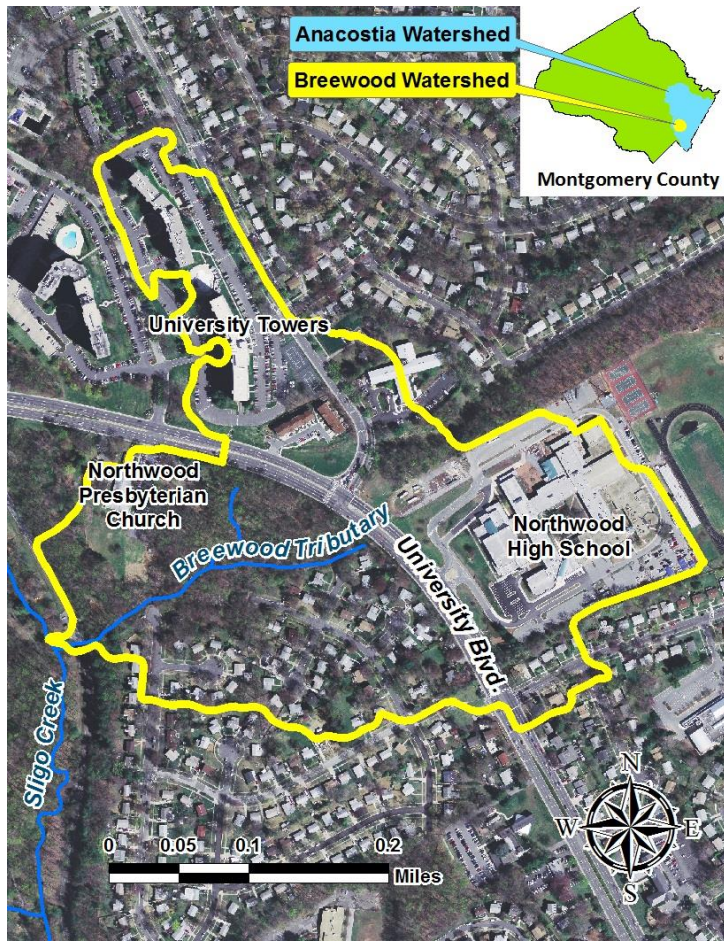


## The Breewood Tributary Restoration



(Image from the Montgomery County Department of Environmental Protection)

During the past several years, extensive efforts have been made to restore the Breewood Tributary, a small stream that feeds into Sligo Creek just downstream of University Boulevard. The Breewood Tributary basin drains stormwater runoff from 63 acres of highly developed urban areas. The restoration of the Breewood Tributary has been a testing ground to determine the effectiveness of using green infrastructure, or Environmental Site Design (ESD), in restoring the tributary's water quality. Various ESD practices were used to slow down stormwater runoff, spread it out, and soak it into the ground where it can be cooled and cleansed before it enters into the Breewood tributary and Sligo Creek. Water quality and quantity monitoring stations have been installed to provide trending data on the effectiveness of the restoration efforts.

The on-going restoration project has been made possible with the coordinated efforts of the County's Department of Environmental Protection, the Washington Suburban Sanitary Commission, homeowners in the Breewood Manor community, students and faculty at Northwood High School, the University Towers Condominiums, Northwood Presbyterian Church, Potomac Appalachian Trail Club/Hiking Along, and volunteers from Friends of Sligo Creek.



**Before photo:**  
**Uncontrolled stormwater runoff had resulted in heavy erosion along the Breewood Tributary. The sediment from the erosion, along with pollutants and heated runoff from hard surfaces like roadways, flowed into Sligo Creek and the Anacostia River, where it contributed to the degraded water quality and aquatic habitat of both those waterways.**



**Throughout the Breewood Manor community, green street landscaping was incorporated into the restoration plan. Hot, polluted runoff from the roads and other hard surfaces has been diverted into specially designed rain gardens where the runoff will be cleansed and cooled off.**

**Green Streets are roadway landscaping designs that reduce and filter stormwater runoff. Green Streets are part of a County initiative to capture stormwater runoff in neighborhoods which have minimal stormwater controls and too little open space for larger stormwater practices. They use ESD practices and are constructed within the street right-of-ways.**



**You cannot manage what you cannot measure. As part of the Breewood Restoration Project, water quantity and quality monitoring stations have been installed to measure the effectiveness of the restoration efforts. Over the past 6 years, “before restoration,” water quality data has been collected. It will take several years of “after restoration” monitoring to determine the effectiveness of green infrastructure in managing**



**“After photo” of the Breewood Tributary. The stream restoration included the incorporation of Regenerative Stormwater Conveyance (RSC) techniques. Step pools and woody debris were added along the stream. What was once a largely lifeless dry creek bed is now full of aquatic vegetation creating habitat for aquatic creatures. The initial green infrastructure controls appear to have improved the base flow of stream. Additional green infrastructure projects are expected to be completed in the next two years. The water flow monitoring station will determine the actual flow improvements.**



**Trash and exotic invasive plants are big problems in the Breewood tributary and surrounding wooded areas. Over the past several years, numerous clean up and Weed Warrior events have been held. Volunteers from Friends of Sligo Creek and Northwood High School made significant progress in cleaning up the stream and removing exotic invasive plants. Much of the work was related to the installation of the Northwood Chesapeake Bay trail that volunteers installed and have been maintaining. The trail links the Sligo Creek trail and the Northwest Branch trail and goes through the Breewood Forest.**